



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,361	07/20/2001	Alkinoos Vayanos	000315	2255
23696	7590	03/12/2004	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			TRINH, TAN H	
			ART UNIT	PAPER NUMBER
			2684	70

DATE MAILED: 03/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/910,361

Applicant(s)

VAYANOS ET AL.

Examiner

TAN TRINH

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>Z</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7-30-2002 has been received and placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (U.S. Patent No. 6,188,351).

Regarding claims 1, 3, 6, 9, 11 and 14, Bloebaum teaches a system for determining a GPS receiver code-phase search range in an integrated GPS/wireless terminal unit operating in a wireless network (see figs. 1 and 1a-b, fig. 2A, col. 3, lines 55-col. 4, line 5, and col. 11, lines 19-30), the system comprising: a receiver operable to generate a GPS time reference (see fig. 5 GPS epoch clock 66); a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location (see fig. 5, GPS processor 58), the wireless coverage area (see figs. 1B and 2A), the GPS time reference and the estimated wireless signal propagation delay within the coverage area (see fig. 2A and col. 3, line 64-col. 4, line 5),

However, Bloebaum discloses that the mobile station determines the code-phase search range, while the claim requires that the system determines the code-phase search range and transmit to the mobile station. However, for portable device battery life depends on the amount

Art Unit: 2684

of processing performed at the portable station therefore logically it is better for the system to performed complex calculations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bloebaum, and calculate a boundary of the code shift uncertainty at the base station, thereby conserving the battery life of the mobile station.

Regarding claims 2, 4, 7, 10, 12 and 15, Bloebaum teaches wherein the GPS code-phase search range is defined by a center value and a size value (see figs. 2A-B, col. 9, lines 19-col. 10, line67).

Regarding claims 5, 13, Bloebaum teaches for obtaining a time offset utilizes the round-trip wireless signal propagation time between the base station and the terminal unit to establish the time offset (see col. 4, lines 39-43).

Regarding claims 8 and 16, Bloebaum teaches for obtaining a location reference utilizes means for providing terrestrial based trilateration to establish the location reference (see col. 14, lines 34-51).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

King (U.S. Patent No. 6,300,899) discloses fixed site data-aided GPS signal acquisition method and system.

Art Unit: 2684

Camp, Jr. (U.S. Patent No. 6,070,078) discloses reduced global positioning system receiver code shift search space for a cellular telephone system.

Wang (U.S. Patent No. 6,415,154) discloses method and apparatus for communicating auxiliary information and location information between a cellular telephone network and a global positioning system receiver for reducing code shift search time of the receiver.

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (703) 305-5622. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Tan H. Trinh
Art Unit 2684
March 5, 2004

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7-30-2002 has been received and placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloebaum (U.S. Patent No. 6,188,351).

Regarding claims 1, 3, 6, 9, 11 and 14, Bloebaum teaches a system for determining a GPS receiver code-phase search range in an integrated GPS/wireless terminal unit operating in a wireless network (see figs. 1 and 1a-b, fig. 2A, col. 3, lines 55-col. 4, line 5, and col. 11, lines 19-30), the system comprising: a receiver operable to generate a GPS time reference (see fig. 5 GPS epoch clock 66); a controller operable to calculate a GPS code-phase search range with reference to a base station geographic location (see fig. 5, GPS processor 58), the wireless coverage area (see figs. 1B and 2A), the GPS time reference and the estimated wireless signal propagation delay within the coverage area (see fig. 2A and col. 3, line 64-col. 4, line 5),

However, Bloebaum discloses that the mobile station determines the code-phase search range, while the claim requires that the system determines the code-phase search range and transmit to the mobile station. However, for portable device battery life depends on the amount

Art Unit: 2684

of processing performed at the portable station therefore logically it is better for the system to performed complex calculations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Bloebaum, and calculate a boundary of the code shift uncertainty at the base station, thereby conserving the battery life of the mobile station.

Regarding claims 2, 4, 7, 10, 12 and 15, Bloebaum teaches wherein the GPS code-phase search range is defined by a center value and a size value (see figs. 2A-B, col. 9, lines 19-col. 10, line67).

Regarding claims 5, 13, Bloebaum teaches for obtaining a time offset utilizes the round-trip wireless signal propagation time between the base station and the terminal unit to establish the time offset (see col. 4, lines 39-43).

Regarding claims 8 and 16, Bloebaum teaches for obtaining a location reference utilizes means for providing terrestrial based trilateration to establish the location reference (see col. 14, lines 34-51).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

King (U.S. Patent No. 6,300,899) discloses fixed site data-aided GPS signal acquisition method and system.

Art Unit: 2684

Camp, Jr. (U.S. Patent No. 6,070,078) discloses reduced global positioning system receiver code shift search space for a cellular telephone system.

Wang (U.S. Patent No. 6,415,154) discloses method and apparatus for communicating auxiliary information and location information between a cellular telephone network and a global positioning system receiver for reducing code shift search time of the receiver.

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (703) 305-5622. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Tan H. Trinh
Art Unit 2684
March 5, 2004



NICK CORSARO
PATENT EXAMINER